

Crab and spider share a web — Arthropods are arguably the most successful of all animal groups and may account for three-quarters of the animal species inhabiting this planet. They can occur in prodigious numbers and are to be found in virtually every marine, freshwater and terrestrial habitat. Their hard outer skeleton and jointed legs have served them well in the evolutionary game.

In the sea, crustaceans are the dominant arthropods. On the land, a more diverse assemblage includes insects, spiders, mites, centipedes, scorpions and others. A few crustaceans, mostly isopods (slaters), have made the land their home but are usually confined to moist, shaded habitats. In freshwaters, crustaceans and insects share the title of dominant "joint-leg".

Interactions between arthropods are common enough. Crabs eat crabs and smaller crustaceans, spiders eat insects. But it was with some surprise that one of us (DJB) discovered an odd variation on the theme.

In September 1991, a stroll in a Spearwood backyard revealed a web of a Red-back Spider, *Latrodectus hasseltii*, with a most unusual victim. Tangled in the tough strands was a small crab, 12.5 mm across the shell, dead but in externally good condition.

Examination in the laboratory showed the crab to be *Cyclograpsus audouinii*, the smooth shore crab. This is a common species along the southern coast of Australia from Western Australia to New South Wales. It is a shallow subtidal and intertidal burrowing species and can survive for long periods without access to the sea. The Spearwood backyard had several burrows that might possibly belong to one or more of these crabs. Presumably the burrows extended to the water table. The species requires sea water to breed so the population could not be self sustaining without a to-and-from migration over the three kilometres between the backyard and the ocean. In any case, this was one crab that would never see the ocean again.

In all likelihood, this arthropod conflict would have been very one sided. Red-back Spider webs can entangle small snakes and mammals which then fall prey to the venomous host. A small crab would have been easy game. The fact that the crab was in perfect external condition, however, leaves open the possibility that it had become entangled and merely died of desiccation rather than through injection of spider's venom.

The crab had wandered into the spider's home ground and paid the ultimate price. Drop a Red-back into the ocean and the story would be very different.

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Bird notes from the saltmarsh near Sandfire Flat — Midway between Port Hedland and Broome the Great Northern Highway passes over the western end of a large saltmarsh, which provides food for thousands of waterfowl and waders after heavy rain. For example, on 16 March 1980 at 7 km east of Sandfire Flat I saw 17 Pelicans, nine Grey Teal, two Red-capped Plovers, two Australian Pratincoles, 200 White-headed Stilts, 20 Red-necked Avocets, 40

Silver Gulls, 200 Gull-billed Terns and 1000 Whiskered Terns. All the terns were in nuptial plumage and the Whiskered were breeding 6 km further east. Here I examined 30 nests placed on low samphires in the shallow water. Two-egg clutches were common, and most of the eggs were chipping. There were also many downy runners. The adult terns were fishing in a ditch excavated for a culvert.

On 19 March 1980 three more species were found breeding at 8 km east of Sandfire Flat. Red-kneed Plovers were very common, and 15 nests were found with eggs ranging from fresh to just hatched; there was one clutch of five eggs, ten of four eggs, and four of three eggs. White-headed Stilts were common and sitting on heavily incubated or chipping eggs; I counted 20 clutches of four eggs and four of three eggs. There were 24 Red-necked Avocets here; two pairs had clutches of four fresh eggs, and another two pairs were building.

I returned to the saltmarsh on 26 March 1980. At 11 km east of Sandfire Flat there were five Black-throated Grebes, 50 Hoary-headed Grebes, 300 Pelicans, 200 Pacific Herons, one White-faced Heron, two Little Egrets, 50 Straw-necked Ibises, 200 Grey Teal, one Whistling Kite, 1000 White-headed Stilts (including many immatures), 200 Silver Gulls (a wing collected for R.E. Johnstone was typical of the Kimberley population), 200 Gull-billed Terns (including three immatures) and 500 Whiskered Terns (including many immatures). The herons, terns and gulls were feeding on Yellow-tailed Trumpeters *Amniataba caudavittatus*; these small estuarine fishes were abundant at the time.

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